Eagle Vision II upgraded, ready for duty

By MAJ Tim Haynie

COLORADO SPRINGS, Colo. — With a new paint job and almost $2 million in state-of-the-art improvements, Eagle Vision II is ready to take on its new mission: providing commercial imagery support to the Coalition Joint Task Force-7 and Central Command.

Less than six months ago, EVII was just an empty shell on wheels and the Commercial Exploitation Team, 1st Satellite Control Battalion, consisted of only two deployable Soldiers. In the coming months, the U.S. Army Space and Missile Defense Command/Army Forces Strategic Command staff and the 1st Space Battalion would transform the CET into a cohesive, deployable team ready to begin a highly complex and challenging mission set to improve Space support to the warfighter.

Two years ago, Army Space Command anticipated taking delivery of the EVII commercial imagery direct downlink ground station and designed a team to man the system, the CET. Manning and delivery of the system to Colorado Springs began in the fall of 2003. SMDC/ARSTRAT then set to work locating Soldiers and funding to begin the process of breathing life back into the EVII program. To make matters more difficult, many of the components making up the EVII system were outdated, in need of maintenance or simply did not meet the Commercial Exploitation Team's requirements for providing support to the Army.

Commercial imagery has a reputation for being untimely and often hard to get, yet there is tremendous value in the unclassified data that goes beyond a literal analysis of pixel groups. Space officers within the Coalition Provisional Authority and CJTF-7 set to work identifying shortfalls within their collection systems that could be supported via a direct downlinked commercial imagery ground station. These officers went on to advocate the utility of spectral imagery analysis and geospatial intelligence as seen during Operation Iraqi Freedom through the use of the Air Force's Eagle Vision I ground station to support Special Operations Forces.

Interest stirred within the commands and a few capabilities briefings later, CJTF-7 and CPA were requesting that CENTCOM bring the CET into theater. The CET followed up with a briefing to CENTCOM, who saw the potential to use the CET not only to support CPA and CJTF-7, but also to cover other hot spots within CENTCOM's area of operations because of EVII's satellite visibility.

The Spectral Operations Resource Center has a history of designing and building imagery analysis powerhouses, so the mission to bring EVII into the 21st century was a familiar one. The task list was enormous and the timing left little room for delays in order to meet the specified CET arrival date into theater. The challenge to coordinate this effort went to the SORC's contractor Brian Plaisted, a former ARSPACE officer. The SORC also enlisted the help of Darren Willey, a former ARSTRAT NCO with more than 10 years of satellite experience, five of them with EVII. While the SORC could handle the redesign and construction of the analysis and production components, the task to rebuild the imagery acquisition segment would have to go to an outside contractor. The SORC solicited the work to the commercial imagery community and eventually awarded the contract to the Vexcel Corporation of Boulder, Colo.

Through the months of February and March 2004, the SORC's Roger Ward burned up the phone lines purchasing components while Vexcel was busy assembling and testing software needed to downlink imagery at their lab in Boulder. Meanwhile, Dave Christianson, SSG Jeremy Jones and SPC Taurus Jones were elbow-deep within the heart of EVII installing four new imagery workstations and a massive data archive system needed to handle the imagery analysis and production missions. The mammoth EVII 5.4-meter antenna was inspected, serviced by the manufacturer and found to be in satisfactory shape despite sitting idle for the past year.

Finally, on March 19, only a few days after Vexcel installed its downlinking components and with CET Soldiers sitting alongside, EVII caught its first satellite acquisition on its ascending pass. Success? We wish! Anyone can catch a satellite in flight; turning a stream of data into a picture is the real talent and for the next three weeks we continued to burn in the components needed to make sense of the data. It was but the first of many, many passes to come.

Meanwhile, the 1st Space Battalion filled the last remaining team vacancy to complete the Army's first and only Commercial Exploitation Team. All but one

SPC Joshua Foye, left, and SGT Kat Estrada set up the Eagle Vision II. *Photo by MAJ Tim Haynie*

was new to the world of commercial imagery ground stations, but none were strangers to deployments. Five members of the team had already supported OPERATIONS ENDURING FREEDOM AND IRAQI FREEDOM during deployments to Afghanistan, Iraq, Kuwait and Qatar; they had fought with the Marines over the Tigris River, sweated through the humanitarian efforts of the CPA and took the fight to the Taliban regime.

Before the CET Soldiers could deploy, they had to first become Team Certified on the equipment and mission essential skills. Team Certification consisted of three training levels. Tasks ranged from the normal weapons qualification and force protection to the complex spectral imagery analysis and EVII system build up/tear down. Once again, the SORC was there to help with the training and provided some of the world's best spectral imagery analysts to hone the individual skills needed to exploit commercial imagery. MSGT Rich Burch (USAF) passed along one of the most valuable lessons learned locating mass graves and finding desert anomalies during OIF: sometimes you don't know exactly what your mission is until you get embedded with your unit and find out what they need. Based on this, team certification had to cover a wide range of skill sets and involve cross training team members to ensure redundancy in key tasks.

Much of the team training involved direct interface with the National Geospatial-Intelligence Agency (NGA) to iron out procedures for requesting and receiving imagery, procedures never before established and at this point still written in pencil, as we're currently proposing new methods for commercial imagery support. The team also received extensive training in ground station operations. In order to validate EVII's reception capability, the CET had to perform a number of downlinks and transmit the required post-pass reports. All of this led up to team certification, completed only one week before the team prepared to load the equipment on the aircraft.

Fast forward to the present: with EVII in place, and Army Space Support Team 3 operating as the CET's liaison, the battalion's "One Space Team, One Fight" concept is set to provide CENTCOM with direct downlink commercial imagery. While much remains to be worked out, the CET ensures that directly downlinked commercial imagery gets to the people who need it, when they need it, throughout the command.

MAJ Tim Haynie is the FA40 Commander of the 1st Space Battalion's Commercial Exploitation Team currently on his second deployment to the Middle East in support of Operation Iraqi Freedom. MAJ Haynie has been working with the Eagle Vision II system since it was delivered to the Army in July 1999 and deployed world-wide providing directly downlinked commercial imagery and imagery products to warfighters.